

## CLAIMS

What is claimed is:

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1. A system comprising:  
a primary root splitter to split a data stream transmitted from an upstream server into a plurality of leaf splitter streams;  
a plurality of leaf splitters to split each of said leaf splitter streams into a plurality of end user streams, wherein one or more of said plurality of leaf splitters is a backup root splitter; and  
root splitter reassignment logic to reassign one of said backup root splitters as a new primary root splitter responsive to detecting a problem with said primary root splitter.

2. The system as in claim 1 further comprising a load balancer module to direct client streaming requests to particular leaf splitters based on relative load on said leaf splitters.

3. The system as in claim 1 further comprising a redirection subsystem to redirect client streaming requests to a particular point of presence site.

4. The system as in claim 2 further comprising load balancer update logic for removing said backup leaf splitter from said plurality of leaf splitters to which said load balancer directs user streaming requests responsive to said backup root splitter being reassigned as a primary root splitter.

5. The system as in claim 3 further comprising redirection subsystem update logic for notifying said redirection subsystem of said new primary root

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3 splitter responsive to said backup splitter being reassigned as said new primary  
4 root splitter.

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1 6. The system as in claim 5 wherein said redirection subsystem update  
2 logic transmits said new primary root splitter's IP address to said redirection  
3 subsystem.

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1 7. The system as in claim 1 further comprising publish point update  
2 logic for updating publishing points within said system responsive to said  
3 backup root server being reassigned as said primary root server.

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1 8. The system as in claim 1 further comprising monitoring logic for  
2 monitoring said primary root splitter to determine whether said root splitter is  
3 operating within normal parameters.

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1 9. The system as in claim 8 wherein said monitoring logic receives a  
2 periodic heartbeat signal from said primary root splitter, and wherein not  
3 receiving said periodic heartbeat signal for one or more periods indicates a  
4 problem with said primary root splitter.

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1 10. The system as in claim 8 wherein said monitoring logic transmits a  
2 monitor signal to said primary root splitter, and wherein not receiving a  
3 response from said root splitter indicates a problem with said primary root  
4 splitter.

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1 11. A method comprising:  
2 monitoring a primary root splitter to ensure that said primary root splitter  
3 is operating within predefined parameters, said primary root splitter to split a  
4 single data stream into multiple data streams transmitted to multiple leaf  
5 splitters; and  
6 reassigning one of said leaf splitters as a new primary root splitter  
7 responsive to detecting that said primary root splitter is not operating within  
8 said predefined parameters.

1 12. The method of claim 11 further comprising:  
2 updating a load balancer module to indicate that said leaf splitter is  
3 reassigned as a primary root splitter, said load balancer module for distributing  
4 user streaming requests to one or more of said leaf splitters based on load on  
5 each of said leaf splitters.

1 13. The method as in claim 11 further comprising:  
2 updating a redirection subsystem to indicate that said leaf splitter is  
3 reassigned as a primary root splitter, said redirection subsystem for directing  
4 client streaming requests to a particular point of presence site.

1 14. The method of claim 13 further comprising:  
2 updating a load balancer module at said point of presence site to indicate  
3 that said leaf splitter is reassigned as a new primary root splitter, said load  
4 balancer module for distributing user streaming requests to one or more of said  
5 leaf splitters at said point of presence site based on load on each of said leaf  
6 splitters.

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1 15. The method as in claim 13 wherein updating said redirection  
2 subsystem comprises transmitting said new primary root splitter's IP address to  
3 said redirection subsystem.

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1 16. The method as in claim 11 further comprising:  
2 updating one or more broadcast publish points to indicate said new  
3 primary root splitter.

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1 17. A system comprising:  
2 a monitoring subsystem to detect whether a primary root splitter is  
3 operating under predetermined operational parameters; and  
4 root splitter reassignment logic to reassign a backup root splitter as a new  
5 primary root splitter responsive to detecting that said primary root splitter is  
6 operating outside of said predetermined operational parameters.

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1 18. The system as in claim 17 wherein said backup root splitter is also a  
2 leaf splitter to receive a data stream from said primary root splitter and to split  
3 said data stream into a plurality of user streams when said primary root splitter  
4 is operating under said predetermined operational parameters.

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1 19. The system as in claim 17 wherein said monitoring subsystem detects  
2 whether said primary root splitter is operating under predetermined operational  
3 parameters by periodically receiving a signal transmitted from said primary root  
4 splitter.

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1 20. The system as in claim 17 further comprising load balancer logic for  
2 directing client streaming requests to said leaf splitter based on relative load of  
3 said leaf splitter in relation to one or more additional leaf splitters.

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1 21. The system as in claim 20 further comprising a redirection subsystem  
2 to redirect client streaming requests to a particular point of presence site at  
3 which said load balancer and one or more of said leaf splitters reside.

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1 22. An article of manufacture including a sequence of instructions which,  
2 when executed by a processor, cause said processor to:

3 monitor a primary root splitter to ensure that said primary root splitter is  
4 operating within predefined parameters, said primary root splitter to split a  
5 single data stream into multiple data streams transmitted to multiple leaf  
6 splitters; and

7 reassign one of said leaf splitters as a new primary root splitter responsive  
8 to detecting that said primary root splitter is not operating within said  
9 predefined parameters.

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1 23. The article of manufacture as in claim 22 including additional  
2 instructions which, when executed by said processor, cause said processor to:

3 update a load balancer module to indicate that said leaf splitter is  
4 reassigned as a primary root splitter, said load balancer module for distributing  
5 user streaming requests to one or more of said leaf splitters based on load on  
6 each of said leaf splitters.

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